



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Title II of the Patent Cooperation Treaty)

Applicant's or agent's file number RL 609 WO	FURTHER ACTION See Form PCT/IPEA/416																	
International Application No. PCT/EP2005/001909	International filing date (<i>day/month/year</i>) 24/2/2005	Priority date (<i>day/month/year</i>) 23/3/2004																
International Patent Classification (IPC) or national classification and IPC INV. F16L3/00 F16B37/04 F16B5/02 F16B37/08																		
Applicant A. RAYMOND & CIE et al.																		
<p>1. This report is the preliminary examination report that has been established by the international preliminary examining authority according to Article 35 and is being transmitted to the applicant in accordance with Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. The report also includes ATTACHMENTS that comprise</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> (<i>sent to the Applicant and the International Office</i>) 5 pages in all; they are</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> Pages with the Specification, Claims, and/or drawings that have been amended and underlie this report, and/or pages with corrections to which the authorities have agreed (see Rule 70.16 and Section 607 of the Administrative Regulations).</p> <p style="margin-left: 40px;"><input type="checkbox"/> Pages that replace previous pages, but which for the reasons indicated in Box No 1, Point 4, and in the additional box, contain a change that goes beyond the disclosed content of the International Application in the form originally submitted.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent only to the International Office</i>) (please indicate the type and number of this/these data carrier(s) in all, that contain(s) a sequence record and/or the associated tables, only in electronic form, as indicated in the additional box with regard to the sequence record (see Section 802 of the Administrative Regulations).</p> <p>4. This report contains data on the following points:</p> <table style="margin-left: 20px; border: none;"> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the decision</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Substantiated statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting this statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>			<input checked="" type="checkbox"/> Box No. I	Basis of the decision	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Substantiated statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting this statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/> Box No. I	Basis of the decision																	
<input type="checkbox"/> Box No. II	Priority																	
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																	
<input type="checkbox"/> Box No. IV	Lack of unity of invention																	
<input checked="" type="checkbox"/> Box No. V	Substantiated statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting this statement																	
<input type="checkbox"/> Box No. VI	Certain documents cited																	
<input type="checkbox"/> Box No. VII	Certain defects in the international application																	
<input type="checkbox"/> Box No. VIII	Certain observations on the international application																	
Date of submission of the request 1/18/2006	Date of completion of this report 5/30/2006																	
Name and address of international examining authority:  <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> European Patent Office - Giltschlner Str. 103 D-10958 Berlin Tel. : +49 30 25901 - 0 Fax: +49 30 25901 - 840 </div>		Authorized officer: Granger, H. Tel.: +49 30 25901-516 																

Box No. I

Basis of the report

1. With regard to **language**, the decision is based on

- ☒ the international application in the language in which it was submitted.
- ☐ a translation of the international application into the following language, which is the language of the translation that was submitted for the following purpose:
- ☐ international search (according to Rules 12.3 a) and 23.1 b))
 - ☐ publication of the international application (according to Rule 12.4 a))
 - ☐ international preliminary examination (according to Rules 55.2 a) and/or 55.3 a))

2. With regard to the **components*** of the international application, the report is based on *(amended pages that were presented to the Application Office on request pursuant to Article 14, are considered to have been "originally submitted" in the context of this report and are not attached to it):*

Specification, pages

3-6 as originally filed
1, 2, 2a received on 1/18/2006 with letter of transmittal dated 1/14/2006

Claims, Nos.

1-7 received on 1/18/2006 with letter of transmittal dated 1/14/2006

Drawings, pages

1/4-4/4 as originally filed

- ☐ a sequence record and/or any associated tables - see additional field with regard to the sequence record
3. ☐ The following documents are omitted because of the amendments:
- ☐ Specification: page
 - ☐ Claims: No.
 - ☐ Drawings: page/figure
 - ☐ Sequence record: *(exact information):*
 - ☐ Any tables belonging to the sequence record *(exact information):*
4. ☐ This report was prepared without consideration (of some) of the amendments attached to this report and listed below, since in the opinion of the authorities, they go beyond the disclosed content as originally submitted, for the reasons given in the additional box (Rule 70.2 c)).
- ☐ Specification: page
 - ☐ Claims: No.
 - ☐ Drawings: page/figure
 - ☐ Sequence record: *(exact information):*
 - ☐ Any tables belonging to the sequence record *(exact information):*

* If Point 4 applies, some or all of these pages can be given the notation "Replaced."

Box No. V Substantiated statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-7
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-7
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-7
	No:	Claims	

2. Documents and explanations (Rule 70.7):

See supplemental sheet

Re Item V

Substantiated statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

The following document is cited:

D1: DE 195 33 138 C1

1. Document **D1** is considered to be the most similar state of the art relative to the object of Claim **D1**. **D1** discloses a device pursuant to the preamble of Claim 1.
2. The object of Claim 1 differs from **D1** in that "the part of the drive component (17) engaged rotationally with the screw component (11) is designed with a tool stud structure (20) that can be engaged with a hand tool."

The object of Claim 1 is therefore new (Article 33(2) PCT).

3. The task underlying the invention is accordingly to describe a device of the type mentioned initially with which a definite set arrangement relative to the support can be obtained with automated assembly even with radial tolerances in the positioning of threaded bolts.
4. The method proposed for this task in Claim 1 of this Application is based on an inventive act (Article 33(3)) for the following reasons: the method is neither disclosed nor anticipated in the prior art. The drive component (**7a**) in **D1** is not expected to be rotated, since it adheres to the sheet metal cage (**3a**) from a painting process. Consequently, one skilled in the art would not provide the drive component with a hand tool.
5. Claims 2-7 are dependent on Claim 1 and thus likewise meet the requirements of the PCT with regard to novelty and inventive act.

DEVICE TO BE FASTENED TO A SUPPORT WHICH IS PROVIDED WITH
A THREADED BOLT

This invention relates to a device to be fastened to a support that is provided with a threaded bolt pursuant to the preamble of Patent Claim 1.

Such a device is disclosed by DE 195 33 138 C1. In the previously known device, the screw component is screwed onto a threaded section of the threaded bolt and there is an abutment area against which the screw component rests in its final position. The screw component has a first engagement structure in the form of radially extended flat projections. There is also a rotatable part that has a second engagement structure in the form of receptacle pockets overdimensioned radially with respect to the flat projections, which is engaged with the first engagement structure, with the screw component and the part being movable radially with respect to one another, at least before assuming the final position. The screw component is thereby mounted to float in the part.

DE 200 23 083 U1 discloses a clamp with a female fastening element that has a plurality of movable segments, which engage on the profile of a male fastening element. This produces a rotationally fixed connection between the female fastening element and the male fastening element.

Other devices for fastening to a support that has a threaded bolt are known in practice and have a screw component in the form of a threaded nut that can be screwed onto a threaded section of a threaded bolt to rest against an abutment area in its final position. Cable holders connected to the previously known devices, for example, can in fact be fastened to threaded bolts, but they have the drawback that with a position relative to the support to be preserved, tolerances in the positioning of the threaded bolts cannot be compensated for, or only in extremely limited fashion, for purposes of automated assembly.

The task underlying the invention is to describe a device of the type mentioned initially, with which a definite set arrangement with respect to the support can be preserved with automated assembly, even in case of radial tolerances in the positioning of threaded bolts.

This task is accomplished pursuant to the invention by a device of the type mentioned initially with the characterizing features of Patent Claim 1.

By providing that the screw component and the drive component are engaged with one another with radial mobility and rotationally fixed, and thus the screw component is also turned by the interaction of the engagement structures when the drive component is turned by the engagement of a hand tool with the tool stud structure, radial tolerances in the positioning of the threaded bolts can be compensated for even with a set positioning relative to the support.

Other useful refinements of the invention are the object of the subclaims.

A preferred example of embodiment of the invention is described below with reference to the figures. The figures show:

Fig. 1 an example of embodiment of the invention in a perspective exploded view that is integrated in a cable holder and that has a screw component and a drive component mounted in a ring cage,

Fig. 2 the example of embodiment of Fig. 1 in another perspective exploded view,

Fig. 3 the example of embodiment of Fig. 1 and Fig. 2 in a cutaway perspective view enlarged relative to the scale of Fig. 1 and Fig. 2, in the area of the screw component and the drive component, and

Fig. 4 the example of embodiment of Fig. 1 to Fig. 3 in a cross-sectional view in the area of the screw component and the drive component in a final position of the screw component on a threaded bolt.

PATENT CLAIMS

1. Device to be fastened to a support that is provided with a threaded bolt (23), with a screw component (11) that can be screwed onto a threaded section of the threaded bolt (23), and with an abutment area on which the screw component rests in its final position, wherein the screw component (11) has a first engagement structure (15), there is a rotatable part (17) that has a second engagement structure (19) that is engaged with the first engagement structure (15), and the screw component (11) and the part (17) are movable radially with respect to one another, at least before assuming the final position, **characterized by the fact** that the part designed as a drive component (17) with a tool stud structure (20) in rotationally fixed engagement with the screw component (11), can be engaged with a hand tool.
2. Device pursuant to Claim 1, characterized by the fact that there is a ring cage (6) that has an abutment area (7), in which the screw component (11) and/or the drive component (17) is/are held.
3. Device pursuant to Claim 2, characterized by the fact that the drive component (17) is held in the axial and radial directions.

4. Device pursuant to one of the claims 1 to 3, characterized by the fact that the engagement structures have projections (15, 19) extending in the radial direction.
5. Device pursuant to Claim 4, characterized by the fact that outer walls (16, 21) of the projections (15, 19) pointing at one another are arched and rounded off toward the outside.
6. Device pursuant to one of the claims 1 to 5, characterized by the fact that the screw component (11) has at least two internal catches (13) running radially from an outer ring (12) toward one another, whose free ends can be engaged with the threaded section.
7. Device pursuant to Claim 6, characterized by the fact that the internal catches (13) are adjusted in funnel-like fashion in the direction of insertion of the threaded bolt (23).